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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,540	02/03/2005	Karikath Sukumar Varma	1-16908	7555

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EXAMINER	
BALDWIN, GORDON	
ART UNIT	**PAPER NUMBER**
1794	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,540	VARMA ET AL.	
	Examiner	Art Unit	
	Gordon R. Baldwin	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17,19-22 and 28-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17, 19-22, 28-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 43 is objected to because of the following informalities: The applicant has not placed a period at the end of claim 43. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17, 19-22 and 28-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Boel (U. S. Pat. No. 4,190,698) and further in view of Varma (Pub. No. WO/2002/024445).

Consider claim 17, 20-22, 28-32, 41-43, De Boel teaches a light transmitting fire screening panel (considered to be transparent) comprising at least one sheet of glass and one layer of intumescent material which comprises a layer of a hydrated alkali metal silicate and polyhydric alcohol in the form of glycerine, or ethylene glycol with the addition of sodium aluminate as the alkali metal aluminate. (Abstract and Col. 3 lines 5-10 and 65-68) De Boel also teaches that the thickness of the intumescent layer is at most 8mm and therefore can be in a range of greater than zero to 8mm. (Col. 4 lines 15-22) It is also taught that the weight ratio of SiO_2 to Na_2O was 3.3 to 1 with the percentage of water being 34%. (Col. 4 lines 45-55)

However, De Boel does not teach the use of a hydroxyl carboxylic acid with the clear intumescent layer, but Varma teaches a process for the production of an intumescent layer (that is 0.3-5.0 mm thick) upon the surface of a glass substrate which comprises a alkali metal waterglass with a alkali metal salt of carbonic acid or an alpha-hydroxy carbolic acid, which can be citric acid. (Claims 1, 2 and 11) Also, multiple glass sheet can be used. (Para. 23)

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the intumescent layer of De Boel with the intumescent layer of Varma with an alpha-hydroxy carbolic acid that would aid in the drying process of the intumescent layer. (Para. 15 on page 3)

Consider claim 19, 38-40, while neither De Boel nor Varma seem to teach the percentage of aluminum nor the ratio of silicon to aluminum, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the aluminum content for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider claims 33-37, Varma teaches a sodium silicate waterglass with a weight ratio of SiO2:Na2O is at least 2:1 more or preferably the weight ratio is at least 2.5:1 and preferably 2.85:1. Varma also teaches an alkali metal silicate waterglass with potassium silicate and lithium silicate waterglass wherein the ratio is SiO2:K2O is in the range 1.4:1 to 2.1:1. (Para. 12 and 13 on page 3)

Consider claim 43, the neutralization of the aluminate with a hyrdroxy carboxylic acid before mixing the silicate waterglass is considered to be a product-by-process limitation and even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process., (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious different between the claimed product and the prior art product (*In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113).

Additionally it is not clearly seen how this intermediate process step makes a physically different coating than the combination of De Boel or Varma.

Response to Arguments

Applicant's arguments filed 9/19/2007 have been fully considered but they are not persuasive. The applicant's arguments against De Boel stating that there are no examples given of an interlayer, which comprises any one of the inorganic adjuvants, is not persuasive. For a reference to be prior art, it does not have to specifically give a working example of each and every member of a Markush group in a specific reduction to practice of a particular article. As such, all the disclosures in a reference must be

evaluated for what they fairly teach one of ordinary skill in the art even if the art teachings relied upon are phrased in terms of a non-preferred embodiment or even as being unsatisfactory for the intended purpose, *In re Boe*, 148 USPQ 507 (CCPA 1966); *In re Smith*, 65 USPQ 167 (CCPA 1945); *In re Nehrenberg*, 126 USPQ 383 (CCPA 1960); *In re Watanabe*, 137 USPQ 350 (CCPA 1963). By the stated case law, so long as the interlayer can fairly be taught to comprise sodium aluminate (which it does in Col. 3 lines 5-10) then the De Boel reference is considered to teach the use of sodium aluminate as an inorganic adjuvant.

Additionally, the layers of the intumescent material, taught by De Boel, are made to be transparent in a multilayer configuration and therefore are considered to be optically clear. ((Col. 3 lines 32-55)

The applicant's argument against the combination of De Boel and Varma has been considered but is not persuasive. De Boel is specifically mentioned in the prior art of the Varma reference by stating that it is known to use adjuvants such as glycerol and sodium aluminate to facilitate the reduction of cracking of the interlayer during the drying process thereby allowing for the formation of a clear dried interlayer in addition to improving the fire resistant performance of the interlayer. (Page 2, paragraphs 1-4 of Varma)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon R. Baldwin whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB

KEITH D. HENDRICKS
SUPERVISORY PATENT EXAMINER